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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,819	09/17/2003	Stephen P. Kasten	6499-A-2	7231

7590

12/16/2005

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EXAMINER

LAWRENCE JR, FRANK M

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,819

Applicant(s)

KASTEN, STEPHEN P.

Examiner

Frank M. Lawrence

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 9, each of the references to “55” should be changed to “56” to be consistent with the drawings, or new drawings should be submitted including the numeral “55”.

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification as filed provides no antecedent basis for the new claim limitations that recite “accommodating a flow of ozone” to the ozone generator.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is unclear how the conduit can accommodate a flow of ozone from the venturi or entraining device to the ozone generator. For example, in the specification at page 3, line 4 and page 8, lines 6-9, it is indicated that the check valve (54) provides a closed gaseous environment, which it appears would prevent the back-flow of ozone. While it is understood that water may

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flow from the venturi to the generator by displacing ozone in the conduit, it is unclear from the specification how the back-flow of ozone would be accommodated. Claims 2-6, 8-10, 12-15 and 16-20 are rejected for depending from rejected base claims.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 15-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 15 recites the limitation "said venturi" in line 8. There is insufficient antecedent basis for this limitation in the claim. Claims 16-20 are rejected for depending from a rejected base claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 11-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Burris et al. (2002/0094209).

10. Burris et al. '209 teach a system for injecting ozone into a tank of water, comprising injecting ozone into water drawn from a contact chamber (23) using a pumping system (19),

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providing an ozone generator (16) for generating ozone that is transferred to the pumping system through a connecting conduit, providing a porous hydrophobic material (31) in the conduit to prevent water from flowing back to the generator while accommodating the back flow of ozone, and drawing raw material air into the ozone generator through a suction line that includes an air drying filter (desiccant 17) having upstream and downstream check valves (18) for regulating the flow of air into the generator and allowing only an inflow of air (figure 1, paragraphs 14, 15, 16). The pumping system can include a positive pressure pump or one of the systems disclosed in U.S. Patent No. 5,207,993, which also includes a venturi and pump combination (figure 3).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 2 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burris et al. '309 in view of Burris (5,207,993).

13. Burris et al. '309 disclose all of the limitations of the claims except that the system includes a filter for filtering water drawn from the tank. Burris '993 discloses a system for injecting ozone into a flow of water from a reservoir (36), comprising filtering the water flowing from the reservoir with a filter (40), and injecting ozone into the water using a pumping system such as a venturi before returning the water to the reservoir (figure 5, col. 2, line 56 to col. 3, line 6, col. 4, lines 63-68, col. 5, lines 37-49). It would have been obvious to one having ordinary skill in the art at the time of the invention to add a filter to the treatment loop of Burris et al. '309

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in order to provide a means for removing impurities and reducing the purification load required of the ozone treatment.

14. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaefer (3,685,656) in view of Burris (5,213,773).

15. Schaefer '656 discloses a system for adding ozone to water flowing from a reservoir, comprising filtering water drawn from the reservoir in a filter (48), injecting ozone into the filtered water using venturies (16,18), providing pumps (42,68) for pumping the water, providing an ozone generator (22) for generating the ozone which is transferred to the venturies through conduits connected to each venturi inlet, and drawing raw material air to the ozone generator through a suction line (36) that includes an air dryer (filter, 26) followed by a regulator valve (30) and a check valve (34) that prevents contaminated water from backing up into the suction line if the system malfunctions (see figures, col. 1, line 57 to col. 2, line 50). A second check valve (40) is provided downstream of the ozone generator for preventing the back-flow of water into the generator. The instant claims differ from the disclosure of Schaefer '656 in that the conduit connecting the generator and venturi accommodates a flow of ozone from the venturi to the generator.

16. Burris '773 discloses a system for injecting ozone into a flow of water through a conduit connected to a venturi in the flow of water, wherein the conduit includes a check valve (22) or porous hydrophobic material that will accommodate the flow of ozone but prevent any liquid back-flow (col. 3, lines 51-66, figures). It would have been obvious to one having ordinary skill in the art at the time of the invention to substitute a porous hydrophobic material for the check

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valve (40) in the Schaefer system in order to provide a means with no moving parts for protecting an ozone generator that could be damaged by liquid.

17. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schaefer '656 in view of Burris '773 as applied to claim 15 above, and further in view of applicant's admitted prior art.

18. Schaefer '656 in view of Burris '773 discloses all of the limitations of the claim except that the ozone supply conduit includes a loop disposed above the level of water in the reservoir. Applicant's admitted prior art discloses that a loop section can be provided above a tank water level in an ozone supply conduit (instant figure 1, page 6, lines 16-21). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the ozone supply conduits of the prior references by including a loop above the reservoir water level in order to prevent damage to the ozone generator or loss of water from the reservoir.

Response to Arguments

19. Applicant's arguments filed April 19, 2005 have been fully considered but they are not persuasive. Applicant argues that the Schaefer patent fails to disclose a system having a conduit connecting the ozone generator with the ozone-injecting device, wherein the conduit accommodates a flow of ozone from the injector to the generator. The examiner agrees with this argument and has withdrawn the 35 USC 102(b) rejection over Schaefer. New rejections are presented to address the new limitations in the amended claims. As discussed above, the new limitations also appear to be new matter that was not enabled in the instant specification.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank M. Lawrence
Primary Examiner
Art Unit 1724

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6-29-05

Frank Lawrence